

REMARKS

To more particularly point out and distinctly claim the subject matter for which patent protection is sought, Applicant has limited claims 1 and 6 to a polyurethane containing poly(oxyethylene) moieties having a molecular weight of 1,000-1,400. Support for this amendment appears at page 7, lines 21-22 of the Specification. Applicant has also removed a term objected to by the Examiner from claims 1, 4-6, and 8-12. Finally, Applicant has added new claim 13, which recites an embodiment of the ion exchange material recited in claim 6. Support for this claim can be found in claim 6 and at page 8, lines 11-18 and page 10, lines 3-25 of the Specification. No new matter has been introduced by the above amendments. **The proposed amendment should be entered as it raises no new issues that will require further consideration or search and also do not touch the merits of the application within the meaning of 37 C.F.R. § 1.116(b).**

Claims 1-13 are currently pending. Reconsideration of the application, as amended, is respectfully requested in view of the remarks below.

Rejection under 35 U.S.C. § 112, 2nd paragraph

Claims 1-12 are rejected as being indefinite. See the Office Action, page 2, lines 16-17. More specifically, the Examiner objects to the term "superabsorbent.". Applicant has removed the term "water superabsorbent," all occurrences, from claims 1, 4-6, and 8-12.

Rejection under 35 U.S.C. § 102(b)

Claims 1-12 are rejected as being anticipated by Lawson et al., WO 94/00237 ("Lawson"). See the Office Action, page 2, lines 1-2. In particular, the Examiner states that "there is no indication on this record that the Lawson polyurethane foam cannot absorb hydrophilic water as well as a hydrophobic organic solvent, such as toluene." See the Office Action, page 2, lines 11-13. He then proceeds to conclude that claims 1-12 are anticipated by Lawson.

Applicant discuss independent claims 1 and 6 first. Amended claim 1 covers an ion exchange material that includes two components: (1) a polyurethane foam, and (2) an ion exchange medium in the polyurethane foam. Amended claim 6 covers a process of extracting

metal ions from solutions or slurries by using an ion exchange material that includes a polyurethane foam. Each of amended claims 1 and 6 recites that "the foam includes a polyurethane that contains poly(oxyethylene) moieties having a molecular weight of 1,000-1,400." Lawson does not disclose an ion exchange material that includes such a polyurethane as required by amended claim 1, nor does it disclose a process of using such a polyurethane as required by amended claim 6. Thus, claims 1 and 16 are not anticipated by Lawson. Neither are claims 2-5 and 7-12, all of which depend from claim 1.

New Claim

Applicant submits that new claim 13 is also not anticipated or rendered obvious by Lawson. Claim 13 covers a method of extracting metal ions from solutions or slurries by using an ion exchange material. The ion exchange material is prepared by reacting an isocyanate terminated prepolymer with an excess of water, in the presence of an ion-exchange medium and in the absence of a silicone surfactant. The isocyanate terminated prepolymer is formed from two components: (1) poly(oxyethylene) glycol and (2) TDI, MDI, MDI-based isocyanate or a mixture thereof. The ion-exchange medium is in one of the following three forms: (1) a solid ion exchange polymer, (2) an organic ion exchange liquid absorbed into a solid sorbent or a porous granule, and (3) a water-based ion exchange polymer emulsion.

Lawson does not disclose or suggest an ion exchange material prepared by reacting an isocyanate terminated prepolymer with an excess of water, as required by claim 13. It also does not disclose or suggest preparing the ion exchange material in the presence of an ion-exchange medium that is in one of the three forms recited in claim 13. Finally, Lawson does not disclose or suggest preparing the ion exchange material in the absence of a silicone surfactant, as also required by claim 13. Thus, claim 13 is not anticipated or rendered obvious by Lawson.

CONCLUSION

For the reasons stated above, Applicant submits that the grounds for the rejections asserted by the Examiner have been overcome, and that claims 1-13, as pending, define subject matter that is definite, novel, and nonobvious over the prior art. On this basis, it is submitted that all claims are now in condition for allowance, an action of which is requested.

Applicant : William Harold Jay
Serial No. : 09/509,301
Filed : March 23, 2000
Page : 7 of 7

Attorney's Docket No.: 11750-002001 /
2274032/PO9462/97-MJC

Please apply any other charges to deposit account 06-1050, referencing Attorney's
Docket No: 11750-002001.

Respectfully submitted,

Date: 3-8-05

Y. Rocky Tsao
Y. Rocky Tsao, Ph.D., J.D.
Attorney for Applicant
Reg. No. 34,053

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906
21009468.doc